

Abstract of the Disclosure

A GaN series surface-emitting laser diode and a method for manufacturing the same are provided. The GaN series surface-emitting laser diode includes: an active layer; p-type and n-type material layers on opposite sides of the active layer; a first distributed Bragg reflector (DBR) layer formed on the n-type material layer; an n-type electrode connected to the active layer through the n-type material layer such that voltage is applied to the active layer for lasing; a spacer formed on the p-type material layer with a laser output window in a portion aligned with the first DBR layer, the spacer being thick enough to enable holes to effectively migrate to a center portion of the active layer; a second DBR layer formed on the laser output window; and a p-type electrode connected to the active layer through the p-type material layer such that voltage is applied to the active layer for lasing. The laser output window is shaped such that diffraction of a laser beam caused by the formation of the spacer can be compensated for.